Claims:

1. A method for decoding a bit stream representing an image that has been encoded, comprising the steps of:

performing an entropy decoding of the bit stream to form a plurality of transform coefficents and a plurality of motion vectors;

performing an inverse transformation on the plurality of transform coefficients to form a plurality of error blocks;

determining a plurality of predicted blocks based on bidirectional motion estimation that employs said motion vectors, said bidirectional motion estimation including a direct prediction mode and a second prediction mode;

adding the plurality of error blocks to the plurality of predicted blocks to form the image.

2. The method of claim 1 wherein said second prediction mode is selected from the group consisting of forward, backward, and interpolated prediction modes.

3. The method of claim 1 wherein said image has an irregular shape.

4. The method of claim 2 wherein said image is a VOP.

5. The method of claim 1 wherein at least two consecutive images are bidirectionally decoded.

6. An apparatus for decoding an image, comprising:

a decoder for performing an entropy decoding of a bit stream to form a plurality of transform coefficents and a plurality of motion vectors;

an inverse transformer for performing an inverse transformation on the plurality of transform coefficients to form a plurality of error blocks;

a motion compensated predictor for determining a plurality of predicted blocks based on bidirectional motion estimation that employs said motion vectors, said

bidirectional motion estimation including a direct prediction mode and a second prediction mode;

an adder for adding the plurality of error blocks to the plurality of predicted blocks to form the image.

7. The apparatus of claim 6 wherein said second prediction mode is selected from the group consisting of forward, backward, and interpolated prediction modes.

8. The apparatus of claim 6 wherein said image has an irregular shape.

9. The apparatus of claim 8 wherein said image is a VOP.

10. The apparatus of claim 6 wherein at least two consecutive images are bidirectionally decoded.